

In the Claims

1.-34. (cancelled)

35. (currently amended) A video imaging system, comprising:

a camera for generating image data, said camera including:

a storage device positioned on said camera; and

a processor program ~~stored on said storage device;~~

a device program stored on said storage device;

a camera control unit coupled to said camera and receiving said image data,

said camera control unit including:

a processor; and

at least one configurable hardware device;

said processor receiving said processor program for ~~programming of~~

overwriting a pre-existing program on said processor;

said processor receiving said device program for programming of said at least one configurable hardware device;

said configurable hardware device processing said image data received from said camera.

36. (previously presented) The video imaging system according to Claim 35 wherein said at least one configurable hardware device is selected from the group consisting of: field programmable gate arrays, and computer programmable logic

devices; and said processor is selected from the group consisting of digital signal processors, microprocessors and microcontrollers.

37. (previously presented) The system according to Claim 35 further comprising software executing on said camera control unit for determining when said camera is in communication with said camera control unit.

38. (previously presented) The video imaging system according to Claim 35 further comprising a pre-existing device program located on said configurable hardware device for processing the image data.

39. (previously presented) The video imaging system according to Claim 38 wherein said device_program executing on said processor overwrites said pre-existing device program.

40. (previously presented) The video imaging system according to Claim 35 further comprising a pre-existing processor program located on said processor for controlling the configurable hardware device.

41. (previously presented) The video imaging system according to Claim 40 wherein said processor_program executing on said processor overwrites said pre-existing processor program.

42. (previously presented) The video imaging system according to Claim 35 wherein said device program enables said camera control unit to issue a command to said camera to adjust and operating characteristic of the camera.

43. (previously presented) The video imaging system according to Claim 42 wherein said camera sends confirmation to said camera control unit that the command was received.

44. (previously presented) The video imaging system according to Claim 35 further including a second storage device and image data is stored on said second storage device.

45. (previously presented) The video imaging system according to Claim 44 wherein the image data stored on said second storage device is processed image data.

46. (previously presented) The video imaging system according to Claim 35 wherein said at least one configurable hardware device and said processor are physically separate devices.

47. (currently amended) A method for processing image data comprising the steps of:

coupling a camera to a camera control unit;

detecting the connection of the camera to the camera control unit;

accessing a processor program ~~stored in the camera~~;

receiving the processor program with a processor;

programming overwriting a pre-existing program on the processor based on ~~with~~
the processor program;

accessing a device program;

receiving the device program with the processor;

programming a configurable hardware device based on the device program; and

processing image data generated by the camera and transmitted to the camera control unit.

48. (previously presented) The method according to Claim 47 wherein the step of configuring the configurable hardware device further includes overwriting a pre-existing device program on the configurable hardware device.

49. (previously presented) The method according to Claim 47 wherein the step of programming the processor further includes overwriting a pre-existing processor program on the processor.

50. (previously presented) The method according to Claim 47 further comprising the step of issuing a command to the camera from the camera control unit for adjusting an operating characteristic of the camera.

51. (previously presented) The method according to Claim 50 further comprising the step of sending a confirmation to the camera control unit that the command was received by the camera.

52. (previously presented) The method according to Claim 47 further comprising the step of storing the image data on a second storage device.

53. (previously presented) The method according to Claim 52 wherein the image data stored on said second storage device is processed image data.

54. (currently amended) A video imaging system, comprising:

a camera generating image data and having a storage device positioned thereon ~~with a processor program stored on the storage device;~~

a camera control unit coupled to said camera and receiving the image data, said camera control unit having a processor and at least one configurable hardware device;

said processor receiving said processor program ~~from said storage device on~~
~~said camera for programming of~~ for overwriting a pre-existing program on said
processor;

said processor receiving a device program for programming of said at least one
configurable hardware device;

said configurable hardware device processing said image data received from
said camera.

55. (previously presented) The video imaging system according to Claim 54 wherein
said device program is stored on said storage device.

56. (previously presented) The video imaging system according to Claim 54 wherein
said device program configures said at least one configurable hardware device to inter-
face with said camera for timing and control of said camera.

57. (previously presented) The video imaging system according to Claim 54 wherein
a plurality of cameras, each having differing camera characteristics, are attachable to
said camera control unit such that said camera control unit is configured for and inter-
faces with the specific attached camera.

58. (previously presented) The video imaging system according to Claim 54 wherein said at least one configurable hardware device and said processor are physically separate devices.